

Notice of Allowability**Application No.**

10/552,476

Examiner

Erin Snelting

Applicant(s)

STEELE ET AL.

Art Unit

1741

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers filed 12-20-2010.
2. ☒ The allowed claim(s) is/are 46-53,55-57 and 59-62.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date herewith.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

/Matthew J. Daniels/
Supervisory Patent Examiner, Art Unit 1741

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. Applicant's amendment received 12-20-2010 has been entered.

Election/Restrictions

2. Claims 46-53 and 55-57 are allowable. The restriction requirement among Groups I, II, and III, as set forth in the Office action mailed on 02-25-2010, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claims 59-83, directed to a ceria electrolyte, are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim. However, claims 34-45, directed to a method for determining divalent cations, remain withdrawn from consideration because they do not require all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Inventorship

3. Examiner notes that the first named inventor is spelled "Brian Charles Hilton Steele" on both of Applicant's Declaration and Applicant's Application Data Sheet. However, the inventor's name is misspelled as "Brain Charles Hilton Steele" on the Bib Data Sheet. Examiner has noted a correction to the misspelling on the attached Bib Data Sheet.

EXAMINER'S AMENDMENT

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Sean Passino (Reg. No. 45,943) on 01-07-2010.

The application has been amended as follows:

In the claims:

- Claims 34-45 have been cancelled.

- Claim 46, line 8, "between 0.01 mole % and 0.1 mole %" has been changed to --between 0.01 mole % and 0.1 mole % inclusive--.
- Claims 63-83 have been cancelled.

5. The following is an examiner's statement of reasons for allowance:

Examiner previously interpreted the phrase "the concentration of divalent cations" as being the concentration of divalent cations prior to sintering. However, in light of Applicant's comments on the reasons for allowance and reconsideration of the specification and claims, the phrase is being interpreted as the concentration of divalent cations in the fabricated electrolyte after sintering.

The prior art does not teach or suggest the claimed difference between the concentration of divalent cations and the concentration of trivalent cations in a ceria based electrolyte. The prior art generally recognizes contributions of divalent and trivalent cations to properties such as charge neutrality, ion conductivity, and mechanical strength in electrolytes (see references cited below), but none recognize or suggest a relationship between divalent and trivalent cation concentrations as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,509,189 (Tuller et al.)

US 5,665,482 (Mori et al.)

US 2003/0027027 A1 (Cutler et al.)

US 2004/0026668 A1 (Kuroda et al.)

US 2005/0048340 A1 (Bagger et al.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin Snelting whose telephone number is (571) 272-7169. The examiner can normally be reached on Monday to Friday 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Daniels can be reached on (571) 272-2450. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Matthew J. Daniels/

Supervisory Patent Examiner, Art Unit 1741